

REMARKS

In response to the Office Action dated Jan. 24, 2007, Applicant responds as follows. The specification has been corrected to reflect the correct patent number. The claims have been amended to remove objections under 35 USC 112 second paragraph. The claims, 1 to 53 have been amended to distinguish from the rejections under sections 102 and 103. New claim 97 has been added. With respect to the specific rejection of the claims over art, as noted, the claims have been suitably amended to express the invention more clearly and distinctly, and to particularly point out what applicant believes is a novel, useful and unobvious invention. Kindly consider the following specific remarks concerning the invention and the cited references.

In the present invention, the liquid which is injected into the nozzle unit is provided with centrifugal motion therein, so that the pressure injected to each nozzle is essentially uniform, as now recited in independent claim 1. By providing a nozzle unit that is configured such that the pressure at which a liquid is injected to each nozzle of a corresponding set of nozzles is essentially uniform, the liquid that is discharged from the nozzle unit has a defined and controllable stream diameter. The droplets that are discharged from the nozzle unit, which converge downstream to form the mist stream, are prevented from being randomly dispersed due to the pressure and turbulence of the generated air stream that flows over the mist stream and confines the latter to a limited diameter. Thus, the mist stream, which has a thickness considerably less than the thickness of the air stream, as recited in independent claims 1 and 36, has a measurable and controllable lateral dimension so that it can be propelled directly to a desired object, such as a cow to be cooled, while reducing water consumption. This limitation of claims 1 and 36 distinguishes over the art cited and applied.

Other advantages of the present invention as now claimed include the provision of a nozzle unit in which two or more separate liquids can be injected therein through corresponding sets of nozzles, as recited in independent claims 1 and 97. A second liquid can be for example a medicinal solution of benefit to a cow, or a chemical solution to facilitate car washing. Thus, in a predetermined cycle in which two or more liquids are discharged from the nozzle unit, the mist stream comprising the plurality of liquids discharged from the nozzle unit can be propelled to a predetermined location. Also, a control circuit can be employed that is adapted to terminate the flow of liquid for desired periods while maintaining the generation of the air stream. The liquid propelled directly to the desired object can therefore evaporate and eliminate the aggregation of excess water drops on the floor.

Natschke et al, US 6,086,053 (relied upon under section 102) is not an anticipation of the claims as amended. In contrast to the present invention as now claimed, Natschke et al discloses a nozzle unit configured such that the pressure at which water is injected to each nozzle is not essentially uniform. See Fig. 4 which shows that the nozzle 52 closer to hose fitting 50 will receive higher pressure liquid than a nozzle more distant therefrom. Thus the liquid discharged from the nozzle unit is dispersed. A mist stream, if at generated, does not have a controllable lateral dimension and cannot be propelled directly to a desired object. Also, misted water particles are evenly distributed throughout the width of the air stream (column 2, lines 12-15) and are not confined to a limited diameter.

Roach et al, US 6,257,501 (relied upon under section 102) is not an anticipation of the claims as amended. Roach et al discloses an electric fan having a ring-shaped mister manifold. A mist stream having a measurable and controllable lateral dimension cannot

be generated since a cloud is formed whose shape is determined by the instantaneous wind current, and therefore may vary from moment to moment.

Terrell et al, US 6,578,828, cited under section 103 in combination with Roach et al and Natschke et al, also discloses a mist ring, and therefore a mist stream having a measurable and controllable lateral dimension cannot be generated (see for example Fig. 1).

Holster et al, US 4,566,890 cited under section 103 in combination with Roach et al and Natschke et al, is non-analogous art. Holster et al discloses a self purging fin cooler for use with a glass fiber forming bushing assembly. A fin cooler header block is provided with a flow channel for coolant flow and a separate flow channel for cleaning liquid flow. A plurality of cleaning liquid distribution passages extend from the cleaning liquid flow channel to spray nozzles positioned between adjacent cooling fins that extend outwardly from the header block. Each spray nozzle produces a flat, fan shaped spray of cleaning liquid which removes contaminants that accumulate on the tops and sides of the cooling fins. The purpose of the invention is to discharged liquid from the nozzle unit that has a defined and controllable stream diameter. The droplets that are discharged from the nozzle unit, which converge downstream to form the mist stream, are prevented from being randomly dispersed due to the pressure and turbulence of the generated air stream that flows over the mist stream and confines the latter to a limited diameter.

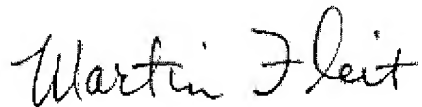
In light of the foregoing remarks, this application should be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to

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Application No. 10/803,868:
Examiner: Saeed T. Chaudhry

the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

A fee of \$100 for one additional independent claim is believed to be due. It is respectfully requested that, if necessary to effect a timely response, this paper be considered as a Petition for an Extension of Time, time sufficient, to effect a timely response, and shortages in this or other fees, be charged, or any overpayment in fees be credited, to the Deposit Account of the undersigned, Account No. 500601 (Docket no. 7640-X04-019).

Respectfully submitted,

A handwritten signature in black ink that reads "Martin Fleit". The signature is written in a cursive, flowing style.

Martin Fleit, Reg. #16,900

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